Features of the Technology Procurement

Overview

As stated earlier there will be one up-to-date computer for every five students. The computer configuration and software will be consistent within a building and across the district. This equates to approximately five computers in every classroom. Each of these computers will be networked and connected to the Internet.

Each high school will have two labs with 30 stations in each lab. Each middle school will have one lab with 30 stations in each lab. There will be enough printers within a building to make it easy and inexpensive to print. There will be approximately one printer per classroom in each building. There will be one network color printer per building.

Each classroom will have the ability to receive video on at least one desktop. This will allow for collaboration with universities and other educational settings around the world.

Teachers and students will have e-mail addresses linked to the network and the Internet.

Each audio/visual department will have an overhead projection unit that can display computer images to the entire classroom. There will be several digital cameras per building. The exact number of digital cameras will be determined based upon the number of students within the building. There will also be at least one scanner per building to allow for multi-media presentations.

Each library will have at least five computers networked and connected to the Internet. At least one of these computers will be used to automate the library functions.

Regular Education

There will be full integration of all curricular subjects with the use of software on the desktops. This includes the use of:

- Spreadsheets and three-dimensional software for math,
- Word processor or specialized reading CD's for language/arts,
- Internet access, word processor, and multi-media for history, and
- Special probes and other electronic devices for science.

Vocational Education

Computers are needed for general business preparation and include the need for Internet access to contact technicians at manufacturers, booking trips, and in general learning how the real business world works.

Special Education

The availability of technology will enhance the learning environment for those in special education. The following tools can assist these students:

- Eye-typers for those who have motor skill deficiencies,
- Other devices to enable students to communicate,
- Enablers for visually impaired,
- Multi-media software to enable those with attention deficit, and
- Numerous tools to enhance the gifted and talented educational program.
- Voice recognition.

Professional Development

Teacher training will be based on the Ohio SchoolNet professional development model, which includes a 75-hour curriculum that will begin at the novice level and conclude at the scholar level. Three modules will take teachers from novice to scholar in one of three technology tools – productivity, information, or media/hypermedia.

The modules include:

- ***Novice:*** This 15-hour curriculum will introduce skills and features of either productivity, information, or media/hypermedia tools. Teachers will gain knowledge by exploring, planning and skill building while using one of these three essential tools.
- ***Practitioner:*** After the novice has been introduced to a tool and has learned the basics of its use, a 45-hour curriculum will afford him/her the opportunity to work with curricular lessons and units that feature the tool as an integral instructional component. These models will provide examples of using the tool to increase learning.
- ***Scholar***: This 15-hour curriculum will build upon the examples that have been used in the practitioner training, the final level provides a framework and technical support for participants to develop individual lessons and units or enhance existing curriculum with technology. The focus of this work is the incorporation of the specific technology into lessons to be used in participants' classrooms.

Estimated Training Costs

Average cost for teacher time while training	$	22.55
Average cost of benefits per hour	$	5.34
Average number of teachers		5,000
Average hours for training		75
Projected total cost of training	$	10,460,381
Ongoing training	$	1,000,000
Projected total cost of training	$	11,460,381

Benefits

Relationship to District goals

Goal One: Increase student academic achievement

- **Students will read at or above grade level by the third grade.**
- **Students will be prepared for algebra by ninth grade.**
- **Graduates will have participated in a meaningful internship.**
- **Graduates will know how to use technology for lifelong learning.**

The Columbus Public School District recognizes that technology knowledge is required for graduates to be literate adults in the 21st century. In order to deposit a check or work as a cashier, technology knowledge is required. CPS is committed to preparing its graduates for work and technology is an integral component of this commitment. Implementing the complete vision for instructional technology will result in graduates knowing how to use technology for lifelong learning. The vision for instructional technology will also improve the instructional process since it will tie it to the state learner competencies.

Another benefit that relates to the first goal of the district is to expand further the technology internship program for students. The implementation of the instructional technology vision will create numerous technology internships within the district. Once students are trained on current technology, the business community will be interested in internships within their companies.

The labs will provide an environment for whole group instruction such as science experiments, learning business software, and proficiency test preparation. The benefit of the multimedia desktop within each classroom will allow for multimedia presentations and video in and out capabilities.

Goal Two: Operate the district more efficiently and effectively

The use of consistent software and hardware across the district will enable the district to realize a cost break since it will be buying in quantity. Buying consistent software and hardware will also reduce support costs for the district. Aligning the software with the state learner competencies will increase the efficiency of the teachers within the district. The use of consistent software and hardware will also make it easier for students and teachers to transfer within the district without losing continuity. This is a very important benefit to the mobile population of the Columbus Public School District.

The ability to communicate with others in the building, district and the world will enable collaboration among teachers and students. E-mail capability will improve the communication between teachers and students as well as teachers and parents. Sharing knowledge bases will allow teachers to spend time facilitating learning in the classroom. Sharing knowledge will also allow students to become independent thinkers and prepare for lifelong learning.

The creation of media centers in each library is an efficient way to use limited classroom technology by allowing students and teachers to research projects outside the classroom. The media center should also be available to parents.

The centralization of the purchase of instructional technology will also improve the efficiency of the treasurers office since fewer purchase orders will be required which equates to fewer checks being prepared and less paperwork in general.

Quality and service of products will be considered before the bottom line costs.

Goal Three: Raise hope, trust, confidence in the Columbus Public Schools

The promise of new technology for the students of the Columbus Public School District will raise the hope of the community. The implementation of the instructional technology will build trust. The actual results will create confidence. The expected results include:

- An alternative tool to teach skills
- Improved skills in the use of technology
- Students prepared for work

Technology Requirements

Hardware

The expectation is that the configurations listed below will change as the technology changes. Detailed hardware requirements are included in the RFP. The minimum-level requirements are included here for illustration purposes.

Standard Desktop

The minimum standard configuration is:

- An Intel Based Processor
- 17" Monitor
- Ethernet Adapter Card – 10/100 BaseT
- 6.0GB Hard Drive
- 32X CD-ROM

Multimedia Desktop

There will be one multimedia desktop per classroom. The configuration for this desktop is:

- An Intel Based Processor
- Speakers
- Video In and video out capabilities
- 17" Monitor
- Ethernet Adapter Card –10/100 BaseT
- 32X CD-ROM (possibly one regular and one DVD)

Mobile Computer

Laptops will be limited to a few per building for multi-media presentations. The configuration for a mobile computer is:

- An Intel Based Processor
- 64 MB memory
- PCMCIA 56K modem

- Ethernet Adapter Card –10/100 BaseT

Printers

There will be one printer per classroom and at least one network printer per building. The configuration for the printers includes:

- Print 17 pages per minute
- 8MB RAM
- Print resolution of 600 dpi x 600 dpi
- Connections include parallel, serial, and network
- Networked printer is a color printer

Servers

There will be a minimum of one server per building for file and print serving. The configuration for the servers includes:

- An Intel Based Processor
- 1 GB memory
- 32 X CD-ROM
- 5 slots and 8 bays
- Ethernet Adapter Card –10/100 BaseT
- Tape Drive Backup larger than the Hard Drive

Other devices

Specific devices are still being determined. At a minimum the following devices will be considered:

- Eye-typers for those who have motor skill deficiencies
- Other devices to enable students to communicate
- Enablers for visually impaired
- Multi-media software to enable those with attention deficit
- Numerous tools to enhance the gifted and talented educational program
- LCD Projection Units
- Digital Cameras
- Scanners

Software

Basic

The basic productivity tools will be on each computer. These tools include the most recent version of:

- Spreadsheet, database, word processor in an integrated package – Microsoft Office Professional or Works
- Communications tool – Netscape (free to educational institutions)
- E-mail – Lotus Notes
- Curriculum Content Sharing – Lotus Notes – Learning Space
- Operating system – Windows NT
- Presentation tool – Hyper Studio and Power Point
- Internet Content Filter (Too be Determined)
- Security and Standardization Monitoring (Too be Determined)

Specific

Elementary students will also receive the most recent version of:

- Kid Pix Studio Deluxe
- Student Writing Center
- Graph Club

Middle school students will also receive the most recent version of:

- Kid Pix Studio Deluxe
- Student Writing Center
- Web Workshop
- Home Page

High school students will also receive the most recent version of:

- Web Workshop
- Home Page

Other specific software will be selected by grade level and by content area. A committee has been formed to make the initial software selections. The software will then be field-tested before final selections are placed on a recommended list.

Partnerships

Existing

There are numerous partnerships already in existence with the Columbus Public School District. These partners will continue to be called upon to assist with the instructional technology implementation.

Technology Advisory Committee

A Technology Advisory Committee was formed to assist the Columbus Public Schools in the development of the instructional technology plan. The businesses involved include Amdahl, Borden, Computer Associates, Huntington, Liebert, and Nationwide Insurance.

Process

Hardware Purchase

This analysis was shared with the Technology Advisory Committee and the Gartner Group. At the same time a facilities readiness was determined. The Instructional Technology team and the legal department then developed a Request for Qualifications (RFQ). The Gartner Group and the Technology Advisory Committee reviewed the RFQ and provided valuable comments, which were incorporated into the RFQ.

The superintendent's report in April included the information developed by this point. A four-week advertisement was submitted according to district procurement policy and is included in Attachment A. On May 12, 1999, a notice was placed on our web page reminding vendors of the deadline for the RFQ process.

An evaluation of the RFQ's occurred during May and June. The evaluations will be shared with the Committee of the Whole in June.

A detailed plan for the installation of the hardware and software will be developed with the selected vendor(s). Installation and training will begin shortly thereafter.

A flowchart of the process being used for the hardware procurement is included in Attachment B.

Software Purchase

The Learning Resource committee was formed through the curriculum department to view supplemental instructional resources to be used in conjunction with the curriculum. These supplemental materials also include software. This committee meets bi-weekly and sees presentations from

vendors. The committee is comprised of content area specialists, teachers, parents, and administrators. Once software has been identified as a potential fit to the district curriculum, copies will be sent to teachers and field-tested with the students for at least a 45-day period. If the software passes the field test, the district will work with the software vendor and Target Teach to ensure alignment with the state learner competencies.

Implementation

The implementation of the hardware procurement will be developed in conjunction with the vendor selected.

Financial Plan

See Attachment C for a detailed breakdown of the costs of the Instructional Technology implementation plan.

Request for Qualification

The Request for Qualification and an analysis of this phase of the process is included as Attachment D.

THE COLUMBUS DISPATCH
PROOF OF PUBLICATION

STATE OF OHIO, FRANKLIN COUNTY, SS:

Traci Edwards
Legal Advertising Representative

The Columbus Dispatch, a newspaper published at Columbus, Franklin County, Ohio, with a daily paid circulation of more than 25,000 copies, personally appeared and made oath that the notice of which a true copy is hereunto attached was published in The Columbus Dispatch for 4 Time(s) on

April 22, 29 and May 06, 13, 1999

and that the rate charged therefore is the same as that charged for commercial advertising for like services.

Traci Edwards

subscribed and Sworn on this 13th day of May 1999 as witness my hand and seal of office.

Carla Rene Daniel

NOTARY PUBLIC - STATE OF OHIO

CARLA RENE DANIEL
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES JULY 25, 1999

The Columbus Public Schools is requesting Statements of Qualifications for the provision of a District-wide instructional technology solution.
The Request for Qualifications is available from Sherry Bird Long at 365-5271 or may be picked up at the Columbus Public Schools Education Center, 270 East State Street, Columbus, Ohio 43215
Deadlines for submission of Statements of Qualifications is May 19, 1999 at 3:00 p.m. EST
4-22,29,5-6,13

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The Request for Qualifications is available from Sherry Bird Long at 365-5271 or may be picked up at the Columbus Public Schools Education Center, 270 East State Street, Columbus, Ohio 43215.

Deadlines for the submission of Statements of Qualifications is May 19, 1999 at 3:00 p.m. EST.

The Columbus POST
by calling
614-251-172
$20.00
per year.

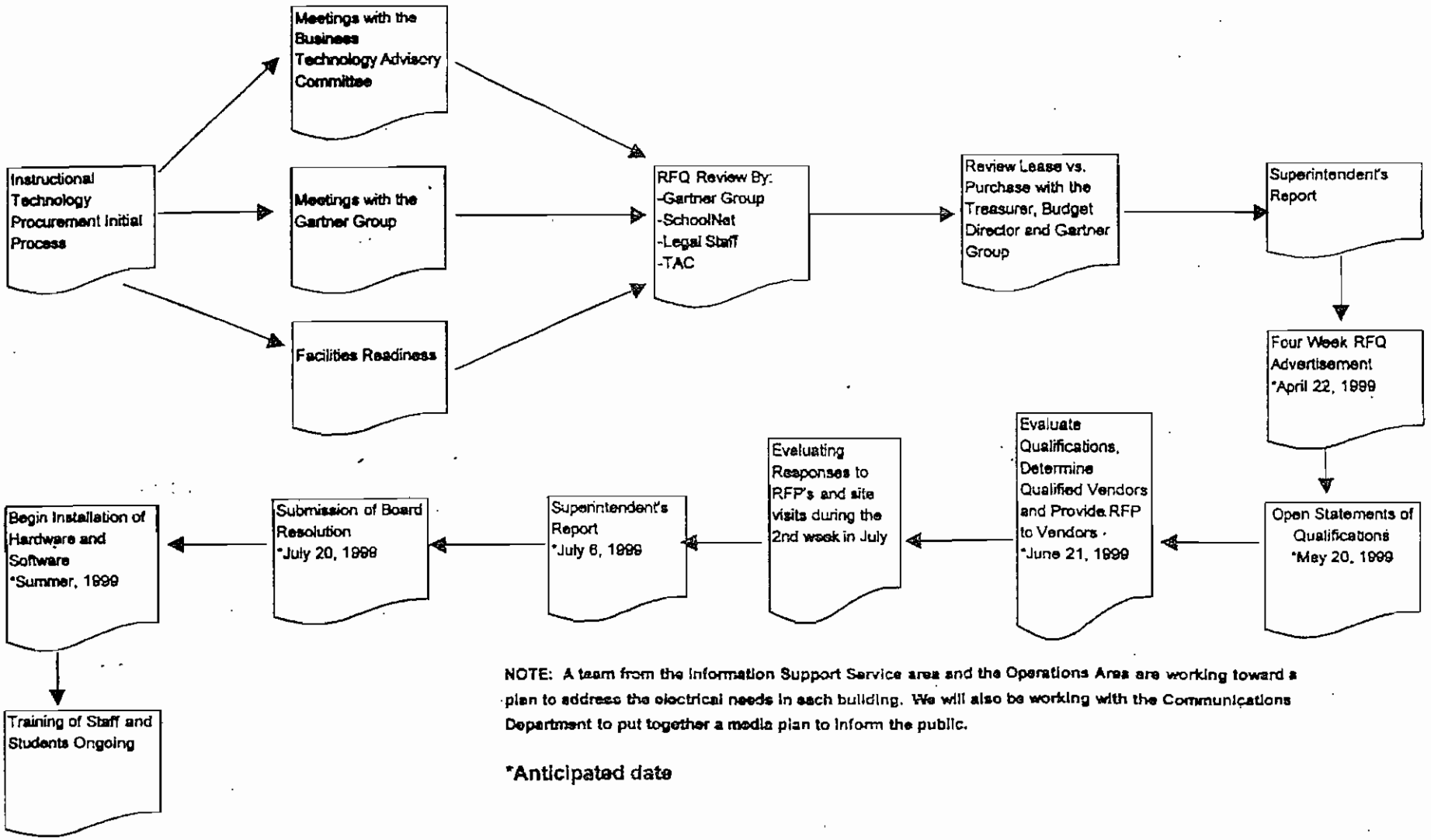
Classifieds

The Columbus Public Schools is requesting Statements of Qualifications for the provision of a District-wide instructional technology solution. The Request for Qualifications is available from Sherry Bird Long at 365-5271 or may be picked up at the Columbus Public Schools Education Center, 270 East State Street, Columbus, Ohio 43215.

Deadlines for the submission of Statements of Qualifications is May 19, 1999 at 3:00p.m. EST.

Attachment B

Instructional Technology Initial Procurement Process



NOTE: A team from the Information Support Service area and the Operations Area are working toward a plan to address the electrical needs in each building. We will also be working with the Communications Department to put together a media plan to inform the public.

*Anticipated date

Attachment C

Projected Costs

Hardware for classrooms		
Average Daily Membership (Approximate)		65,000
1 computer for every 5 students		13,000
Less existing computers (Estimated)		2,400
Career Centers		306
Total number of computers needed		10,906
Average cost of computer	$	1,700
Projected total for classroom computers	**$**	**18,540,200**
Hardware for labs		
Number of high schools		18
Number of middle schools		26
Number of 30-station labs per high school		2
Number of 30-station labs per middle school		1
Total number of computers in labs		1,860
Projected total for lab computers	**$**	**3,162,000**
Hardware for libraries		
Number of libraries		144
Number of computers per library		5
Total number of computers		720
Average cost of computer	$	1,700
Projected total for libraries	**$**	**1,224,000**
File servers		
Number of buildings		144
Average number of file servers per building		1.2
Total number of servers needed		173
Average cost of file servers		$9,000
Projected total for file servers		**$1,555,200**
Printers		
Number of classrooms		3,200
Number of printers needed		3,200
Average cost of classroom printers		$400
Average number of networked printers		144
Average cost of networked printer		$3,500
Projected total for printers		**$1,784,000**
Scanners		
Average number of scanners		114
Average cost of scanner		$4,000
Projected total for scanners		**$456,000**

Projection units	
Average number of projection units per bldg.	1.2
Total number of projection units needed	173
Average cost of projection units	$3,500
Projected total for projection units	**$604,800**
Digital cameras	
Average number of digital cameras per bldg.	4
Total number of digital cameras needed	576
Average cost of digital cameras	$300
Projected total for digital cameras	**$172,800**
Tables	
Average number of tables per classroom	3
Total number of tables needed	9,600
Average cost per table	$84
Projected total for tables	**$806,400**
Surge protectors	
Avg. number of surge protectors per classroom	3
Average cost of surge protectors	$40
Projected total for surge protectors	**$384,000**
Grand total for hardware and peripherals	***$28,689,400***
Software	
Approximate cost for district	$ 7,000,000
Approximate cost for library automation	$ 2,000,000
Projected total for software	**$ 9,000,000**
FTE	
One project manager	**$80,000**
Maintenance	
Included in hardware costs	
GRAND TOTAL	***$38,769,400***

Attachment D

Columbus ublic Schools
(Current Configuration)

11/18/98

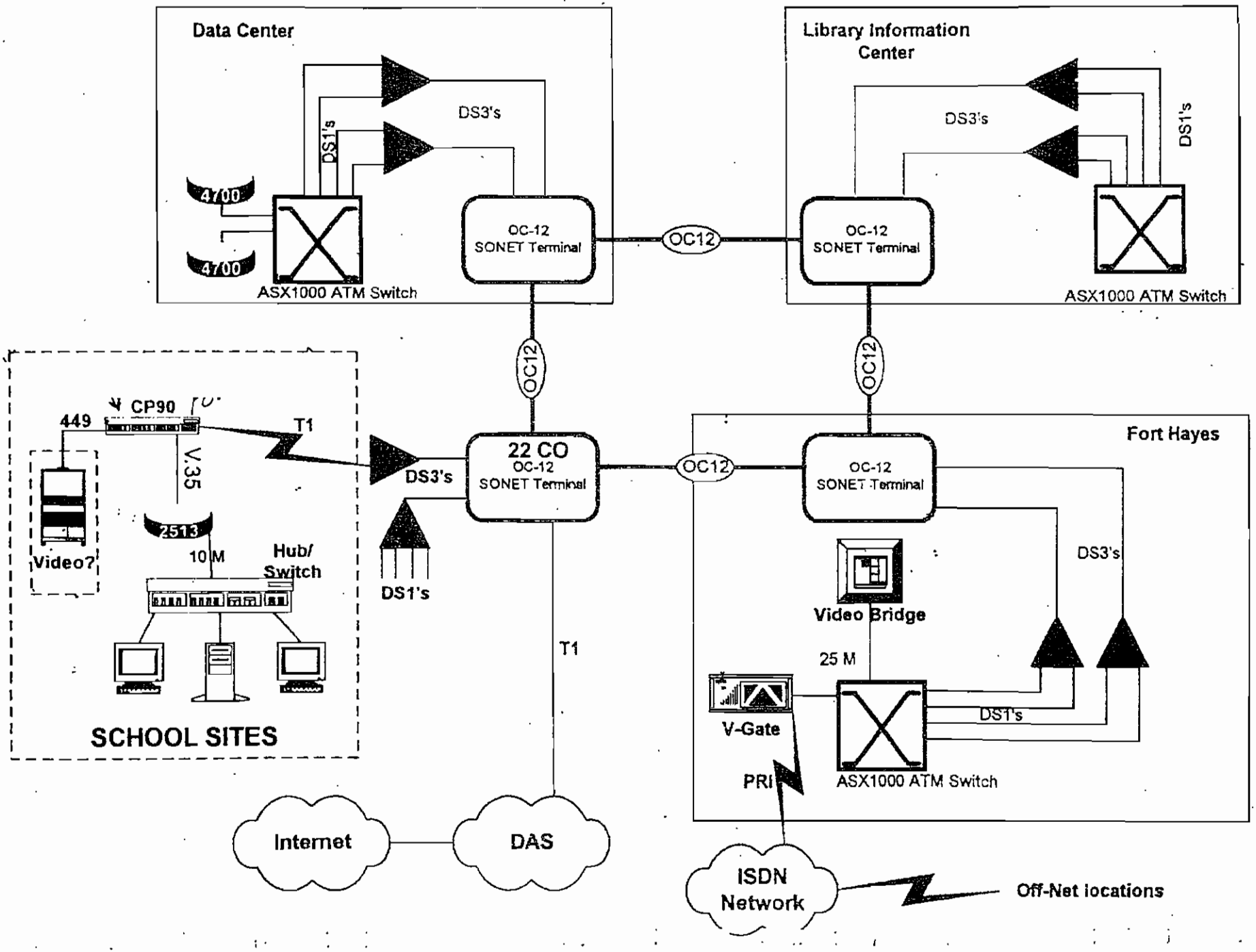


EXHIBIT D

Technology Plan for

Columbus City SD - 043802

School Years: 2003-2004, 2004-2005, 2005-2006

Archived Plan Created: Jan 29, 2004

Description: APPROVED PLAN

Status: Ohio SchoolNet Certified

Certification Period: Jan 29, 2004 - Jun 30, 2006

Printed: Nov 14, 2006

Phase 1 - Initiate Planning

1.1 School District Demographics and Facilities

School District Name: Columbus City SD
District Code (IRN#): 043802
District Address: 270 E State St
Columbus, OH 43215
District Phone #: (614) 365-5000
Superintendent's Name: Harris, Gene

Category	Grade Levels	# Faculty	# Students	# F/R Lunches	# Schools	# Classrooms
Elementary	K-5	2,278.00	30,627.00	22,554.00	93.00	1,909.00
High School/Career Ctr	9-12	1,310.00	15,736.00	7,468.00	23.00	830.00
K-8	K-8	49.00	695.00	315.00	2.00	39.00
Middle School	6-8	1,139.00	15,149.00	11,110.00	27.00	617.00

District and Community Demographics

Columbus Public Schools has served the community since 1845. Our current enrollment is approximately 62,000 students drawn from an area of over 120 square miles within Franklin County, Ohio. We educate those students through 93 Elementary Schools, 27 Middle Schools, 19 High Schools and 4 Career Centers and 2 K-8 schools.

School District Facilities

The District's oldest schools were built in 1874. Twelve schools are now more than 100 years old. Our six newest schools were built more than 25 years ago. The age and condition of the buildings add to the challenges of installing and supporting modern technology. Today's technology was not a consideration when our schools were originally built.

In 2002 the community approved a construction bond levy for replacement and remodeling of schools in the first two phases of the District Facilities Master plan. The levy provided support for 39 projects over the next 6 years. Classroom technology is a consideration in the design of each of those projects.

This bond provides for remodel and renovation for less than one-third of our schools. The remaining facilities are considered in the 20 year planning horizon of the Facilities Master Plan.

1.2 Planning Process Overview

Technology Planning Committee

Name: Phillips, Tim
Role/Organization: Applications Manager / CPS
Plan Subcommittee(s): Main,EAR
Daytime Phone: 740-365-6173
E-mail Address: tphillips@columbus.k12.oh.us

Name: McCarrick, Jack
Plan Subcommittee(s): Main
Mailing Address: 1091 King Ave.
Columbus, Oh 43212

Daytime Phone: 614-365-6173
E-mail Address: jmccarr@columbus.k12.oh.us

Name: Lucas, Paul
Role/Organization: Instructional Technology Director / CPS
Plan Subcommittee(s): Main
Daytime Phone: 614-734-1766
E-mail Address: plucas@columbus.k12.oh.us

Name: Giallombardo, Neena
Role/Organization: Schoolnet Liason / CPS
Plan Subcommittee(s): Main
Mailing Address: 737 E. Hudson St.
Columbus, OH 43211
Daytime Phone: 614-365-8477
E-mail Address: neena@columbus.rr.com

Name: Goldberg, Sharon
Role/Organization: Computer Specialist / Instructional Technology
Plan Subcommittee(s): Main
Daytime Phone: 614-365-5098
E-mail Address: sgoldber@columbus.k12.oh.us

Name: Reynolds, Rick
Role/Organization: Chief Information Officer / CPS
Plan Subcommittee(s): Main
E-mail Address: rreynolds@columbus.k12.oh.us

Name: Fry, Norm
Role/Organization: Technical Support Manager /CPS
Plan Subcommittee(s): Main, Infrastructure
E-mail Address: nfry@columbus.k12.oh.us

Technology Planning Orientation Process

The District implemented a comprehensive approach for developing their 2003 – 2004 District Technology Plan (DTP). In an effort to ensure that the plan represents the interests of all technology departments and schools, an authoring team composed of those directly involved in the utilization of technology at the building and district level was established. The authoring team scheduled bi-monthly meetings to collaborate on development of the plan. This team has included the key educational leadership contacts to obtain input and ensure compliance with the Districts educational goals. The roles involved are as follows:

Chief Information Officer (CIO)
Director of Instructional Information Services
Technical Support Manager
IT Applications Manager

1.3 Technology and Education Reform

Technology in Support of Enhanced Learning and Equity

In technology-rich classrooms, students and teachers should have immediate access to a wide range of technologies, including computers, videodisc players, digital video cameras, scanners, CD/DVD writeable drives, and on-line communications services. In addition, students use an assortment of software programs and tools, including word processors, databases, spreadsheets, and graphics packages. In these classrooms, technology is viewed as a tool for learning and a medium for thinking, collaborating, and communicating.

Technology facilitates problem-based learning. Problem-based learning lets students build on their own knowledge and incorporate new information with what they have already learned. When technology is available to students, it not only opens up opportunities to solve problems, it also provides additional tools for communication and collaboration.

Research has demonstrated that the introduction of technology to classrooms can significantly increase the potential for learning, especially when it is used to support collaboration, information access, and the expression and representation of students' thoughts and ideas. Realizing this opportunity for all students, however, requires a broadly conceived approach to educational change that integrates new technologies and curricula with new ideas about learning and teaching, as well as the authentic forms of assessment.

Students must have equal opportunities to learn. Technology provides an opportunity to better align curriculum delivery with the students readiness and learning styles. Proper application of technology moves us one step closer to meeting the goals for 'No Child left behind'.

Technology in Support of Improved Teaching

To ensure that technology is effectively used in classrooms, a clear connection must be made between technology, the curriculum, and student learning styles. Properly used technology affords teachers the opportunity to enhance their group presentation effectiveness and to spend more direct instruction time aligned with individual student needs.

To accomplish this, the following focuses must continue to be developed:

- Utilization and implementation of professional development as a means of increasing Teacher readiness.
- Enhancing core curriculum units with technology connections.
- Further development of resources which provide teachers online model lesson plans and projects.
- Produce teacher-ready core units with integrated technology applications.
- Develop accountability mechanisms to ensure that technology use supports academic goals.
- Recognition and planning for regular update and/or replacement instructional technology resources.
- Leveraging technologies (voice, video and data) which provide virtual learning opportunities. Providing opportunities to learn where students might not otherwise have access. For example, virtual field trips, WebQuests, and other distance learning activities.

Technology in Support of Decision-Making and Efficiency

The use of data as an assessment and decision tool applies to both the business and instructional areas of the District's business. Technology enhances our ability to sort through large volumes of information in search of knowledge about our efforts.

The benefits of using technology to manage administrative functions of a school or school district are quite easy to see--student information systems, budget management systems, and administrative reporting systems--make life easier for the harried administrator wearing multiple hats. School networking allows teachers and administrators to share files and applications, communicate with each other, and access